Learning to chat: Developing a pedagogical framework for facilitating online synchronous tutorial discussion

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Abstract

The adoption of blended learning in higher education has precipitated the use of technology to conduct tutorials through online synchronous discussion (OSD). The review of literature on OSD identifies a lack of pedagogical guidance for facilitating effective tutorials by this means. The research on computer mediated communication (CMC) is critically discussed alongside established literature on socio-constructivist theory and approaches to teaching and learning with technology. The literature identifies several key responsibilities that should be considered when facilitating an online tutorial. These were embedded in the delivery of an online tutorial with first year undergraduate students. The tutorial was critically evaluated through questionnaire and focus group and a transcript of the discussion was subject to content analysis. The study argues that both tutor and student have roles within a tutorial. Furthermore, isolating the pedagogical role from managerial, intellectual and social roles, as argued in existing models, is ineffective. An alternative framework and considerations for facilitating online synchronous tutorial discussion are presented. Tutors should consider the size of the group, the nature of the tutorial and the characteristics of the application.

Keywords: Online synchronous discussion, socio-constructivism, tutorial, pedagogy.

Introduction

Although the use of virtual learning environments (VLEs) in higher education is growing, and will continue to grow because of current financial pressures, the Office for Standards in Education (OfSTED, 2009) has noted that an understanding of their use in enhancing learning is not widespread. It appears that effectiveness is being limited by a lack of tutor use beyond basic features of content storage for student access, which reinforces a 'transmission' approach to education (Selwyn, 2007). In particular, the pace of technological change has left less time for tutors to evaluate and reflect on the potential of communication tools within VLEs (JISC, 2009).

Despite this, the developing evidence base has encouraged more tutors to use a number of computer mediated communication (CMC) tools to enhance, supplement or replace face to face meetings. One such tool enables online synchronous discussion (OSD), which can be grouped into two categories: online synchronous tutorials (OST) and online synchronous instruction (OSI). Although Chen *et al*. (2005) suggest that OSI communication can either be one or two-way, we would argue that instruction portrays one-way whereas tutorials represent potential two-way

communication. OST is the appropriate term to describe the online teaching and learning interaction reported and analysed in this study because it is predicated on 'two way' communication. However, in the literature reviewed, OST is subsumed by OSD. Therefore we will use the term OSTD as we discuss the issues faced by the first-named author and students when conducting an online tutorial for the first time.

De Freitas and Neumann (2009) have expressed concern that, although there are now published strategies on how to use the key features of these tools, there is little guidance on establishing effective pedagogy for OSTD. This paper presents the process of developing a pedagogical framework to support tutors in facilitating effective OSTD in higher education. The study gathered students' perceptions of the benefits and perceptions of OSTD to support the development of the framework as well as to test the findings of other researchers in relation to our institution. Our research questions for the empirical study are therefore:

- What are undergraduate students' perceptions of the use of an 'online tutorial' to prepare for a written assignment?
- What are the benefits and limitations of using online synchronous tutorial discussion with undergraduate students?
- What pedagogical framework(s) might facilitate effective online synchronous tutorial discussion in an undergraduate university context?

Towards a pedagogical framework for facilitating online synchronous tutorial discussion

A number of conceptual models have been developed specifically for learning and teaching with technology with socio-constructivism at their heart. Current researchers in the field (for example JISC, 2009; Chen *et al.* 2011; Hou & Wu, 2011) have identified socio-constructivism at its core. Salmon's (2004) model focuses specifically on CMC with e-moderating as its core. She shows how the stages structure the mastering of technical skills which require different e-moderating skills. Although this model shows close links with socio- constructivist approaches, JISC (2009) have observed that the tutor must help students to build the necessary skills for such online interaction.

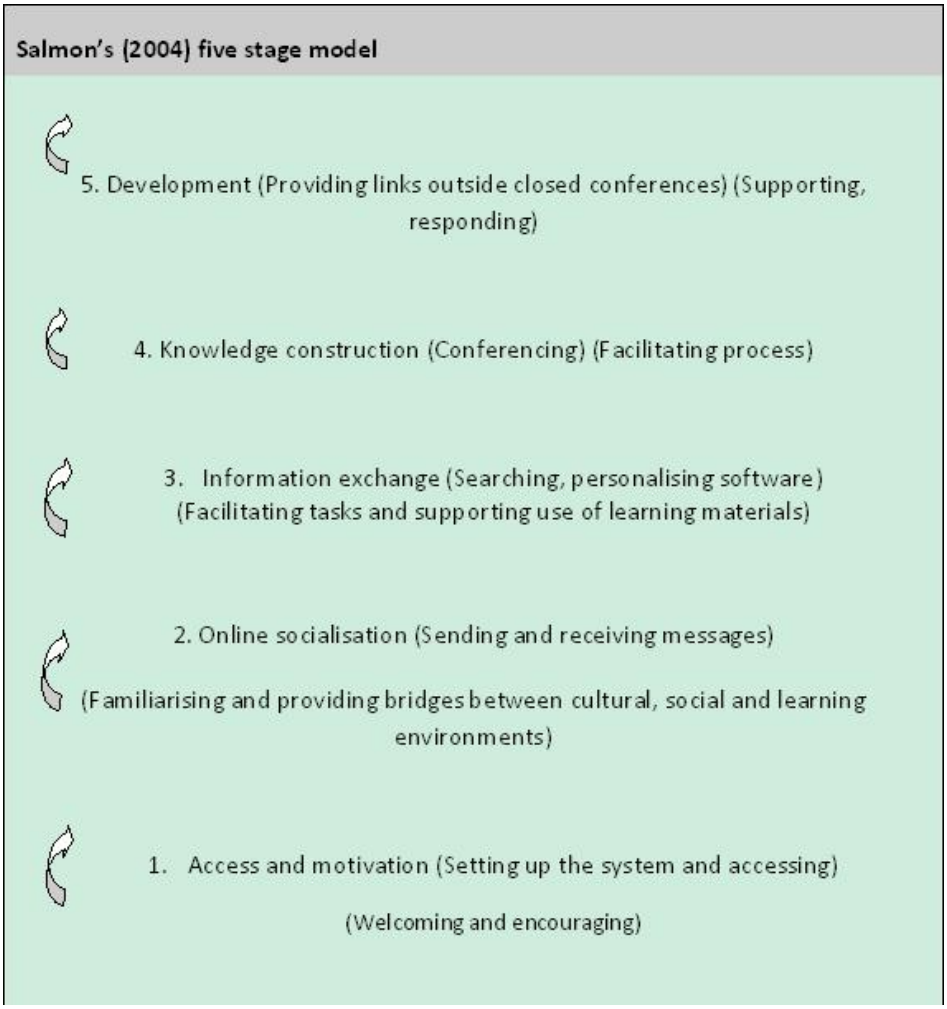

Fig 1 Salmon's Five Stage Model of Teaching and Learning Online.

Research by Lim and Cheah (2003), confirming the earlier work of Mason (1991), has provided key roles and responsibilities for the online tutor. Lim and Cheah (2003) suggest six roles and whilst being focused on asynchronous discussion, encourage educators to trial their recommendations in synchronous environments. Mason (1991) has suggested just three key responsibilities for the online tutor. Following analysis it is proposed that Lim and Cheah's (2003) six roles fit succinctly into the three overarching responsibilities. These complementary relationships can be seen in Fig 2, drawing together the key responsibilities of the online tutor. They provide the online tutor with some guidance on their roles when facilitating OSTD – namely in the areas of social, organisational and intellectual support.

Mason's (1991) three responsibilities for the online tutor		
SOCIAL	**ORGANISATIONAL**	**INTELLECTUAL**
Effective open discussion	Ensure students can access	Provide meaningful learning

requires a safe, supportive environment -welcome message; encourage participation; reward positive contributions	discussions and manage dialogue -objectives; agenda; rules	opportunities for students -Focus the discussion; ask questions; summarise; develop themes; design activities; critique
Lim & Cheah's (2003) six roles of the tutor in asynchronous discussion		
Keeping the discussion focused	Setting meaningful tasks Guiding participants in the 'technicality' of online discussion	Answering queries, providing feedback and posing conflicting views to elicit thinking/reflection Drawing conclusions and providing content expertise Recommending resources for extension of learning

Fig 2 Roles and responsibilities of the online tutor.

However, the work of Ligorio *et al.* (2002) identifies four tutorship functions: social, managerial, technical and pedagogical. When compared with the relationship identified between Mason (1991) and Lim and Cheah (2003) illustrated in Fig 2, it could be suggested that their description of 'Managerial' and 'Technical' functions align well with Mason's (1991) 'Organisational' responsibilities, and the 'Social' functions are the same (Fig 3).

Ligorio *et al.*'s (2002) four tutorship functions			
SOCIAL Support interpersonal relationships through considering personal expressions, needs, requests and feelings	**MANAGERIAL** Co-ordinate and uphold aims	**TECHNICAL** Minimise technical problems	**PEDAGOGICAL** Sustain the content learning process

Mason's (1991) three responsibilities for the online tutor		
SOCIAL Effective open discussion requires a safe, supportive environment -welcome message; encourage participation; reward positive contributions	**ORGANISATIONAL** Ensure students can access discussions and manage dialogue -objectives; agenda; rules	**INTELLECTUAL** Provide meaningful learning opportunities for students -Focus the discussion; ask questions; summarise; develop themes; design activities; critique
Lim & Cheah's (2003) six roles of the tutor in asynchronous discussion		
Keeping the discussion focused	Setting meaningful tasks Guiding participants in the 'technicality' of online discussion	Answering queries, providing feedback and posing conflicting views to elicit thinking/reflection Drawing conclusions and providing content expertise Recommending resources for extension of learning

Fig 3 Alignment of the three models of online tutor responsibility.

However, we disagree that pedagogy as defined by Ligorio *et al*. (2002) as the process of sustaining content learning should be a separate category. Although this definition resonates with Mason's (1991) description of 'Intellectual', we argue that pedagogy cannot be categorised in this way. Not only is pedagogy a concept in its own right; we argue that it drives the social, managerial and intellectual responsibilities of teaching and learning. It is therefore embedded within *all* categories. Therefore, in order to consider how these categories are defined, the pedagogical position must be made explicit in the first instance.

Method

A cohort of undergraduate students (n = 91) enrolled at the TR's university on a Sport and Physical Education degree was asked to participate in a online tutorial as part of a module. The

OSTD was scheduled 5 weeks before the submission of a written assignment for which the students had already received the assignment title and assessment criteria. Year 1 students were selected as these were less likely to have had any prior experience of OSTD in an educational setting (preventing contamination of data) and because assessments in Year 1 do not contribute to degree classification, allowing fewer risks to students. Data was collected through survey, focus group interview and OSD transcript. Ethical permission to conduct the study was given prior to the tutorial and all responses reported were anonymised. The online tutorial was conducted with the 'Live Classroom' application, provided by a commercial company, Horizon Wimba (www.wimba.com).

Discussion

Student perceptions of the online tutorial

Analysis of the questionnaire following the OSTD revealed the students' lack of positivity about its effectiveness. However, students in the focus group felt that the written nature of the discussion aided learning, suggesting that 'because I've got it written down I understand everything I've got to do with the assignment' (FGS2). This suggests that opinion varied considerably. Synthesis of questionnaire results with findings from the focus group and OSTD transcript analyses indicate that many students had no strong feelings either for or against one particular type of tutorial (Bandi-Rao, 2009). Our findings support Kirkpatrick's (2005) assertion that some students found the tool too playful to support real learning. Some students clearly demonstrated similar characteristics to those in Guldberg and Mackness' (2009) study who found that many individuals did not like contributing to discussions or asking questions in f2f environments. For these individuals, the OSTD provided an effective medium to ask questions and to contribute to the ongoing dialogue. Furthermore, although social chat was relatively high, focus group participants agreed that this did not detract significantly from the learning. However, the quantity of discussion *did* make meaningful dialogue confusing. These students, like those investigated by JISC (2009) clearly thought that a smaller group tutorial would have been far more effective. Most students felt that the tutorial had helped them to answer the assignment question more fully. However, although over 40% of students felt confident or very confident to answer the question, 12.5% were still not confident. These initial findings concur with those of Bromham and Oprandi (2006) who suggest that many small scale studies using computer mediated communication find disappointing results.

Benefits and limitations of using online synchronous tutorial discussion

The reported figures do not concur with Chen *et al.'s* (2005) findings that the similarity of OSTD to classroom interactions make it a good choice for tutorial-based activities. The results highlight the perceived failure of the tutorial in helping students to understand key aspects of the assignment. Overall, less than one third of questionnaire respondents claimed that the online tutorial supported their learning 'well'. Zhang *et al.* (2005) also found that OSTD makes reflection and deep learning harder to acquire, whereas others have found much confusion and a lack of

focus (Wang, 2005; Contreras-Castillo *et al*, 2006). However, focus group participants identified that confusion was cleared up quickly by swift responses from other students and the tutor. It is suggested that the large number of students in the OSTD prevented effective learning and enhanced communication (Schroeder *et al.* 2010) as well as Salmon's (2004) knowledge construction and development stages. There was a lack of deep 'scaffolding' during the OSTD, the majority of which facilitated only social discussion and surface-level learning. However, it must be remembered that this study was a 'one-off' tutorial, and Wenger (1998) has argued that socialisation is important in developing a 'community of practice'. Kelly *et al.* (2010) have also pointed out that informal discussion diminished over time, suggesting that it was one way of getting started with the new medium.

A pedagogical framework to facilitate online synchronous tutorial discussion

Overall, the results of the study have provided some support for the future use of OSTD to conduct undergraduate tutorials. However, the success of this tutorial in terms of students' learning was limited, in part, by the lack of coherent and detailed guidance for the tutor of OSTD. The key responsibilities provided by Mason (1991), Ligorio *et al.* (2002) and Lim & Cheah (2003) gave a useful starting point for facilitating OSTD. A finding of the literature review was that pedagogy should be central to and embedded within any categorisation of roles and responsibilities. Furthermore, although Salmon (2004) incorporates technical and e-moderating elements within each stage, this model does not stress the over-arching pedagogical role of social support that is so crucial for developing technical and e-moderating skills. We are indebted to the theorists discussed above, as consideration of their ideas has played an essential part in developing the pedagogical framework presented here. However, we feel their linear models place insufficient emphasis on the complexities involved in applying a socio-constructivist approach to the use of OSTD in learning. A fundamental difference between ourselves and these theorists is that we perceive that pedagogy is at the heart of teaching and learning and so of the proposed framework (Fig 4).

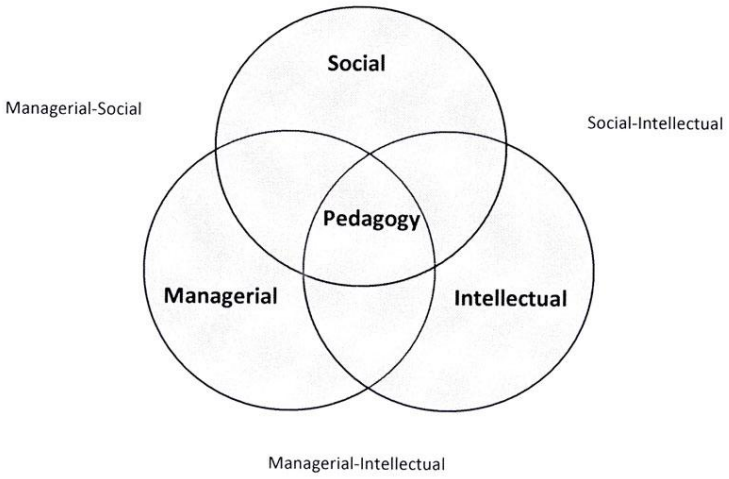

Fig 4 A pedagogical framework for facilitating online synchronous tutorial discussion.

There have been many technological advances over the last twenty years. Nevertheless we support Mason (1991) in his simple but perceptive categorisation of the tutor's online responsibility into the three areas of managerial, intellectual and social. When these three areas are presented as a Venn diagram, pedagogy lies at the central intersection, driving the form and function of the areas of tutor and student responsibility. By pedagogy we mean an individual's world view (ontology), perceptions on how learning takes place (epistemology) and personal values (axiology) manifested in educational practice. We have used Mason's (1991) term of 'manager' and have applied Fleming's (2000) definition of the role as being one involving the organisation and deployment of resources to meet a learning outcome or a target determined by the values and vision. From a socio-constructivist perspective, 'manager' becomes synonymous with 'facilitator'. Therefore in the managerial-intellectual intersection, the tutor as manager facilitates learning directly; in the managerial-social intersection, the tutor as manager facilitates the social environment, knowing these foster the relationships on which socio-constructivism is based. In the intellectual-social space, the tutor has 'let go' of the learning. Control has been given to the learners to establish and develop their community of practice, within which their learning will proceed formally and informally. This will be influenced by the learning direction established in the managerial-intellectual and managerial-social spaces but motivation and method will be learner controlled.

We argue that the complexity of the use of OSTD is more accurately represented by the non-linear, inter-related structure presented in Fig 4 than in the earlier models discussed above. These models were appropriate for, and arose out of, their time. However, social networking has become ubiquitous. Increased e-skills and expectations of both tutor and students to facilitate learning have impacted on pedagogy.

Conclusion

The study has taken the modelling of OSTD forward, arguing for socio-constructivist pedagogy to be at its heart. Given that there are few studies which have provided pedagogical guidance for the online tutor and although there is unlikely to be a one size fits all recipe, the study makes a number of recommendations for enhancing learning during OSTD. However, it would appear that the pedagogical issues in using OSTD are very similar, if not identical, to those encountered in f2f tutorials. Tutors will already be conversant with these strategies through their f2f delivery, but we argue awareness needs to be raised on their application within computer mediated communication.

Tutors of OSTD should be guided by the pedagogical framework for facilitating online synchronous tutorial discussion (Fig 4), developed from the earlier work of Mason (1991), Ligorio *et al*. (2002) and Lim and Cheah (2003). Group sizes should be limited to numbers in which meaningful discussion can be achieved. Research following the tutorial has highlighted that 15-

20 participants is an appropriate number within an online group discussion (HEFCE, 2009) although Benshoff and Gibbons (2011) state that groups should be limited to twelve students so that all students are actively and continuously engaged. The OSTD application should be 'fit for purpose'. We suggest that the application should be based on the medium of communication rather than picking the most elaborate or easily accessible application. Tutors should receive training in how pedagogy impacts on the social, managerial and intellectual components of tutor-student roles and responsibilities. Students should be 'inducted' into the use of OSTD through f2f and online sessions that will provide them with suggestions, guidelines and 'unwritten rules' for how to behave in an online environment. Comparisons with social communication applications should be made so that students are aware of the similarities/differences in the environments.

We recognise that this study is small scale, being a case study of one tutorial led by one tutor with one cohort of undergraduate students. Nevertheless, our findings resonate with those of recent research in the field. We feel confident that the pedagogical framework has arisen from the synthesis of our literature review and empirical research and is feasible. Our recommendation is to test the framework in practice and collect empirical data from a larger sample over a sustained period for analysis. This will enable each role to be described in more detail, together with strategies to facilitate effective use.

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